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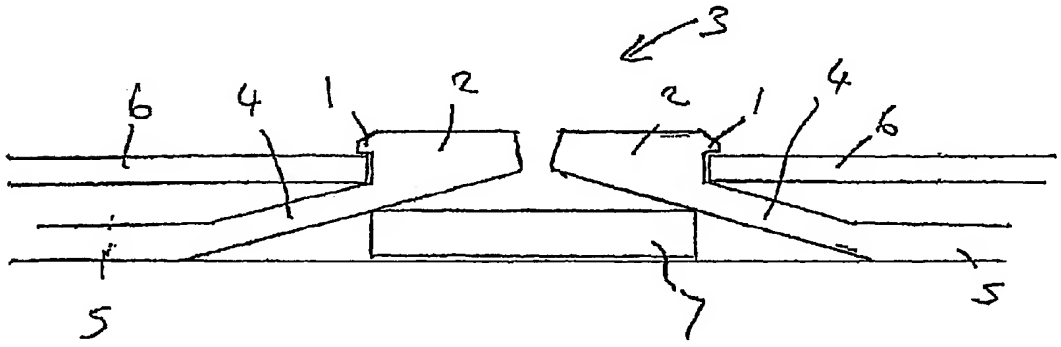
(54) Title: IMPROVED DISK HOLDER



(57) Abstract: Apparatus for holding a disk-shape data carrier (6), e.g. a DC or a DVD, having a central aperture, the apparatus comprising a base portion (5), disk engaging means (1, 2, 4) for releaseably engaging the central aperture of the data carrier (6), having retaining means (1) for engaging and retaining the data carrier (6) on the apparatus and release means (2, 4) which, when pressed, releases the engagement of the retaining means (1) with the data carrier (6) so the data carrier (6) can be removed from the apparatus, wherein removable security means (7) are provided to inhibit actuation of the release means (2, 4) to prevent release of the data carrier (6).

WO 02/31831 A1

IMPROVED DISK HOLDER

TECHNICAL FIELD

This invention relates to an improved disk holder, and more particularly to a disk holder with a security device.

BACKGROUND OF THE INVENTION

Apparatus for holding a disk-shaped data carrier, such as a CD or DVD, are known. Examples of known apparatus are described in US5788068 and WO97/41563 the entire disclosures of which are incorporated herein.

A problem encountered with such known apparatus is the removal and theft of a CD or DVD from the apparatus within a store selling such products. The disk holder is usually provided within a container, which is also provided with a security tag that triggers an alarm if the container is taken out of the store without the tag first being removed or rendered inactive by staff in the store. The container may also be provided with a clear plastic wrapper, which has to be removed before the container can be opened. However, it has been found that thieves are able to slit the wrapper along an edge of the container, e.g. the bottom edge, actuate the release mechanism by pressing it through a side wall of the container to release the CD or DVD from the disk holder within the container. They are then able to remove the CD or DVD from the container by compressing the container so that the side walls bow, forming a gap between the two halves thereof, and the CD or DVD can then be slid out through the slit made in the wrapper. An experienced thief is able to do this whilst pretending to examine the product and slip the CD or DVD into a coat pocket unobserved. The thief can then leave the empty container on the shelf and leave the store with the CD or DVD without triggering the alarm system. Other ways of circumventing the security of known packages are known.

For this reason, many stores only display empty containers and when a customer has made a selection, the staff retrieve the relevant CD or DVD from a secure cupboard or safe and place it in the container for the customer. However, this takes additional time and requires a secure storage place for the CDs and DVDs. It also increases the risk that the wrong CD or DVD may be put in the container, especially if the staff are busy. There is therefore a desire within the trade to be able to display CD and DVD containers with the relevant CD or DVD already held therein; such containers are called 'live' containers within the trade. It has been shown that the display of 'live' containers can increase sales significantly.

One of the aims of the present invention is thus to improve the security of a live container housing a disk-shaped data carrier such as a CD or DVD.

DISCLOSURE OF THE INVENTION

According to a first aspect of the present invention, there is provided apparatus for holding a disk-shaped data carrier having a central aperture, the apparatus comprising:

a base portion;

disk engaging means for releasably engaging the central aperture of a disk-shaped data carrier, the disk engaging means having retaining means for engaging and retaining the disk-shaped data carrier on the apparatus;

release means for releasing the engagement of the retaining means with the disk-shaped data carrier so the disk-shaped data carrier can be removed from the apparatus; and

removable security means to inhibit actuation of the release member and thereby prevent release of the disk-shaped data carrier from the retaining member.

According to another aspect of the invention there is provided a security device for use with such apparatus.

According to a further aspect of the invention, there is provided a security device for preventing removal of a disk-shaped data carrier having a central aperture from a disk holder having disk engaging means for releasably engaging the central aperture of the disk-shaped data carrier, the device comprising one or more parts shaped to fit into one or more gaps formed between parts of the disk engaging means so as to inhibit actuation thereof.

According to yet another aspect of the invention, there is provided a package for containing or storing a disk-shaped data carrier comprising a holder having a base portion, disk engaging means on the base portion the base portion for releasably engaging the disk-shaped data carrier; and a security device that is removably engageable with the disk engaging means.

Preferred and optional features of the invention will be apparent from the following description and from the subsidiary claims of the specification.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be further described, merely by way of example, with reference to the accompanying drawings in which:

Figure 1A is a schematic cross-sectional view through a disk engaging means for releasably holding a disk. Figure 1B shows a first embodiment of a security device according to one aspect of the invention, which is positioned to inhibit actuation of the disk engaging means; Figure 1C shows a second embodiment of a security device positioned to inhibit actuation of the disk engaging means; and Figure 1D shows a modified form of the second embodiment of a security device positioned to inhibit actuation of the disk engaging means.

Figure 2A is a schematic cross-sectional view through another form of a disk engaging means for releasably holding a disk; Figure 2B shows a third embodiment of a security device according to one aspect of the invention, which is positioned to inhibit actuation of the disk engaging means; and Figure 2C shows a fourth embodiment of a security device positioned to inhibit actuation of the disk engaging means.

Figure 3A is a schematic cross-sectional view through a further form of disk engaging means for releasably holding a disk; Figure 3B shows a fifth embodiment of a security device according to one aspect of the invention positioned to inhibit actuation of the disk engaging means; and Figure 3C shows a sixth embodiment of a security device positioned to inhibit actuation of the disk engaging means.

Figure 4 is a perspective view of disk engaging means with a security device similar to that shown in Figure 1B installed therein.

Figure 5A is a schematic cross-sectional view of disk engaging means similar to that shown in Figure 1A, having engageably attached thereto a further embodiment of a security device, which is positioned to inhibit actuation of the disk engaging means through the wall of the container; and Figure 5B is a plan view of this embodiment of the security device.

DESCRIPTION OF PREFERRED EMBODIMENTS

Depending on the requirements, the security devices described herein may be used to provide different levels of security for a live CD or DVD container. In one form, the security device may simply be arranged to make it more difficult to actuate the disk release mechanism through the wall of the container but can be readily removed when the container is opened. Where a higher level of security is required, the security device may be arranged so that although it is easy to

install by sliding it in one direction, it is difficult to slide in the opposite direction and remove without use of a special tool or special equipment. Other variations of the security device which rely on a mechanism that inhibits actuation of the disk release mechanism are within the scope of the invention.

Figure 1A and 1B show a device similar to that shown in US5788068, previously herein incorporated by reference, comprising a retaining member in the form of projections 1 which project radially outwardly from button portions 2, which together form a button-like member 3. The button portions 2 are mounted at the radially inner ends of arms 4, which are resiliently cantilevered from a base portion 5. As described in US5788068, when the button-like member 3 is pressed, each button portion 2 and the projection 1 carried thereby moves about an arc approximately centered on the position 4A where the arm is connected to the base portion. As the projection 1 moves about the arc it simultaneously moves radially inwards and downwards towards the base portion 5. Whilst moving in this manner, the projections press down on the disk 6 adjacent the edge of the central aperture thereof and thus depress the center of disk 6 towards the base portion 5 until the projections have moved radially inward a sufficient distance to release their engagement with the disk 6.

Thus, it will be appreciated that during this action, the button portions 2 and the arms 4 are depressed in a direction towards the base portion 5, ie towards a position in which they would become co-planar with the base portion.

Figure 1B shows one embodiment of a security device in the form of a flat strip 7 which is slid beneath the arms 4, so as to be positioned in a gap beneath the arms 4. The strip 7 thus prevents the arms 4 from being depressed. In view of the nature of the mechanism described above, pressure on the button-like member 3 will thus not release the disk 6, as in order for the projections 1 to be released from engagement with the disk 6, it is essential that the arms 4 be depressed so the projections 1 can move along an arc as described above.

It will be appreciated that the devices of the present invention require that connection between the button portions 2 and the respective arms 4 not to be too flexible, otherwise there is a danger that the button portions 2 may inadvertently be tilted inwardly and thus release the engagement of the projections with the disk.

The strip 7 may take a variety of forms. Preferably it is formed of a relatively tough plastics material such as Nylon™, polypropylene or styrene (the remainder of the device typically being formed of polyethylene or polypropylene) and has a thickness which enables it to be slid under the arms 4 but which prevents any significant depression of the arms 4 towards the base portion. In one embodiment, for instance, the strip may typically be about 1 - 3 mm thick. The strip should have a length sufficient to span the aperture in the base portion beneath the arms (this aperture being present to allow the arms to be formed in a one-shot injection molding process with the base portion) so that it is supported on the base portion on each side of the arms. Typically, the security device has a length of at least 20 mm. If such a short device is used, a special tool may be required to slide it into place after a disk has been mounted on the disk engaging means (as, once the security device is in place, it prevents the disk engaging means from receiving a disk). Alternatively, the security device can be slid in place via the aperture in the base portion beneath the arms.

The strip may have a greater length if it is to be connected to additional security devices and/or if it one end of it is to be accessible at a position beyond the periphery of the disk.

The strip may prevent the button portions or the arms from being depressed, or both. Instead of being a strip of plastic, the security device may take other forms, e.g. a U-shaped piece of metal wire (not shown) of appropriate thickness, with one leg of the U-shape under one arm and the other under the other arm. A simple form of this version of the device can be formed from metal wire such as that used to make a conventional paper clip.

In addition to the disk engaging means illustrated herein as having two arms, other versions of such disk engaging means may be fitted with the security devices of the invention. For example, the security device may be used with disk engaging means having just one arm or more than two arms, e.g. three arms. In the latter case, the security device preferably has a shape which enables it to be slid beneath the arms through a space between adjacent arms and is preferably supported at three points on the base portion, ie at points between each pair of arms.

Figure 1C shows an alternative form of security device 8 which fits in the gap between adjacent button portions 2. This form of the security device may comprise a cap 8A which fits over the button-like member 3 with a projection 8B on its underside shaped to fit into said gap. In this regard, the projection 8B may have a straight or linear configuration if it is to fit in the gap between two semi-circular button portions, or it may have an S-shaped profile if it is to fit in the gap between two button parts having Yin-yang shapes (as shown in WO97/41563, which is herein incorporated by reference).

It will be appreciated from the description above of how the release mechanism operates that when the button portions move about the arcs described, they move radially inwards towards each other so that the button-like member 3 contracts and the gap between the button portions reduces in width. The security device shown in Figure 1C fits snugly within said gap along at least a portion of the length of said gap, and so prevents the button parts from moving towards each other; this prevents the button-like member 3 from contracting when it is pressed. The projections cannot therefore move radially inwards to release their engagement with the disk. The shape and dimensions of the security device 8 may be varied depending on the corresponding shape and dimensions of the gap(s) between the button portions.

For example, such a device may be fitted to a button-like member comprising a plurality of button parts, e.g. two or three. In this respect, it may be sufficient for the device to fit into a gap between just one pair of button parts but preferably it will fit within the gaps between each pair of button parts.

In various embodiments based on this feature, each projection fitting into a gap between the button portions is preferably of a length such that the projection extends well into the gap and is preferably longer than the depth of each button portion. This extension beneath the button portions helps prevent accidental disengagement of the security device, eg when pressure is applied to the outside walls of the container.

As shown in Figure 1D, the security device of the invention may be in the form of a hub insert that comprises a vertical projection 8C, which extends downward into a space beneath the button-like member 3. This projection 8C may be shaped so as to allow easy insertion and a secure fit into the gap between button portions 2; in this respect the configuration of the projection 8C is not limited. The projection 8C is further perpendicularly attached to a pull-tab 8D, which lies substantially co-planar with the disk 6 and the button-like member 3. The pull-tab 8D may be formed of a flexible material, and is thus instrumental for withdrawing the projection 8C from the gap formed between the button portions 2.

The security device shown in Figures 1C and 1D may be used in place of, or in addition to, the security device shown in Figure 1B.

The device represented in Figures 1C or 1D may be completely contained within the interior of a disk package, and does not require any additional processing steps on the part of store retail staff to disengage the device after the package has been sold.

It will be appreciated that the security device shown in Figure 1B prevents the button-like member 3 from being depressed, while that shown in Figures 1C and 1D prevents it from contracting. However, it will be appreciated that in each embodiment, the mechanism prevents the button portions from pivoting downward (about axes located approximately where the arms join the base portion).

Figures 2A to 2C and 3A to 3C correspond to Figures 1A to 1C described above, but show slightly different forms of the releasable disk engaging means.

In Figure 2 the arms 4 and the button portions 2 are of different shape to those shown in Figure 1 but their function is very similar.

In Figure 3, the button portions 2 are mounted on arms 4 which are pivotally mounted at positions 9 to a raised area 10 of the base portion 5 by torsion connections on each side thereof. These torsion connections may comprise thin plastic connections between the arms 4 and the base portion 5. Otherwise, the function of the security devices are similar to those described in relation to Figures 1 and 2.

Figure 4 shows a perspective view of the device shown in Figure 1B. As shown in the Figure, the security device has a substantially rectangular shape with a point at one end (or both ends) to facilitate location of the device beneath the arms.

The security devices described above help secure the disk to the disk engaging means. These security devices may operate independently of closure of the container in which the disk engaging means is housed. In such a case, the container may be opened without compromising the security of the connection between the disk and the disk-engaging member. In such situations, the wrapper conventionally provided around the container may also be omitted.

Figure 5 shows yet another embodiment of a security device according to the invention. As mentioned above, with some types of container it is possible to actuate the unprotected button-like member from outside the container by pressing a wall of the container lying over the button-like member. In most instances, the package wall is relatively flexible, and it can therefore be deflected enough to press against the button-like member. This effect can be prevented if a security device such as that shown in Figure 5 is fitted about the button-like member before the container is closed. This security device comprises a substantially planar plate 11 with an aperture 11A therein as shown in Fig 5B), the aperture being shaped to fit over the button-like member so the plate is fitted around the button-like member (as shown in Fig 5A), the plate having a thickness similar to that of the button-like member. If the wall of the container is now pressed towards the button-like member, the security device prevents sufficient pressure being applied to the button-like member to release the disk. This is due to the fact that pressure applied to the wall of the container is applied to the security device and thus to the disk (in a similar manner to the pressure applied to the disk when it is installed on the disk engaging means). Another way of viewing this is that the security device maintains the part of the wall over the button-like member relatively flat so the wall cannot be deflected to the shape required to press and actuate the button-like member.

The security device shown in Figure 5 typically has a thickness of 1 to 2 mm and a width of around 3 to 10 mm. The plate may be rectangular as shown, circular, or of some other shape.

The security devices described with reference to Figures 1 to 4 serve to secure the disk to the disk engaging means. In a preferred arrangement, a security tag of the type currently used to trigger an alarm if a product is removed from a store without the tag being rendered inoperative or removed may be positioned between the disk and a wall of the container so that the tag can only be removed once the disk has been released and removed.

As an additional feature, the security devices disclosed herein may be printed with text or graphic material according to any suitable technique known in the art. In this respect, the device may carry advertising, product information or cautionary messages, or may be of different colours or colour-coded to permit ready association with certain product classifications.

The security devices described above have the advantages of being simple and having little, if any, undesirable impact on the aesthetics of the container.

Several different embodiments of the security device are described above. It is believed that the present invention includes many other embodiments that may not be herein described in detail, but would nonetheless be appreciated by those skilled in the art from the disclosures made. Accordingly, this disclosure should not be read as being limited only to the foregoing examples or only to the designated preferred embodiments.

CLAIMS

We claim:

1. Apparatus for holding a disk-shaped data carrier having a central aperture, the apparatus comprising:
a base portion;
disk engaging means for releasably engaging the central aperture of a disk-shaped data carrier, the disk engaging means having retaining means for engaging and retaining the disk-shaped data carrier on the apparatus;
release means for releasing the engagement of the retaining means with the disk-shaped data carrier so the disk-shaped data carrier can be removed from the apparatus; and
removable security means to inhibit actuation of the release member and thereby prevent release of the disk-shaped data carrier from the retaining member.

2. The apparatus of claim 1, in which the release means comprises a button-like member that contracts when pressed, and the security means comprises a security member that prevents contraction of the button-like member.

3. The apparatus of claim 2, in which the button-like member comprises a plurality of button portions with at least one gap therebetween, and the security member fits within the said at least one gap.

4. The apparatus of claim 1, 2 or 3 in which the release member comprises a button-like member that depresses when pressed, and the security means comprises a security member which prevents depression of the button-like member.

5. The apparatus of claim 4, in which the security member fits between the button-like member and the base portion.

6. The apparatus of any preceding claim, in which the release means comprises a button-like member, at least part of which pivots when pressed, and the security means comprises a security member that prevents pivoting of the button-like member.

7. The apparatus of any preceding claim, in which the security means comprises a plate having an aperture therein which fits around the release means to prevent actuation of the release means when pressure is applied to the release means via a substantially planar part of the apparatus.

8. The apparatus of claim 3, in which the security member is shaped to extend vertically along at least a portion of the length of the at least one gap between the button portions of the button-like member.

9. The apparatus of claim 8, in which the security member comprises a cap for fitting over the button-like member and having a projection for fitting within said at least one gap.

10. The apparatus of claim 9, in which the security member comprises a pull tab for withdrawing said projection from said at least one gap.

11. The apparatus of claim 5, or any claim dependent thereon, in which the security means comprising a strip for fitting between the button-like member and the base portion.

12. The apparatus of any preceding claim, wherein the security means is printed with text or graphic material, or is coloured.

13. A security device for use in apparatus as claimed in any preceding claim.

14. A security device for preventing removal of a disk-shaped data carrier having a central aperture from a disk holder having disk engaging means for releasably engaging the central aperture of the disk-shaped data carrier, the device comprising one or more parts shaped to fit into one or more gaps formed between parts of the disk engaging means so as to inhibit actuation thereof.

15. The security device of claim 14, wherein the disk engaging means comprises a plurality of button portions with at least one gap therebetween, the device having a projection shaped to fit within said at least one gap.

16. The security device of claim 15, wherein the device comprises a cap that fits over one or more of the button portions.

17. The security device of claim 14, comprising a strip-shaped part for fitting in a gap beneath the disk engaging means to prevent depression of the disk engaging means.

18. A package for containing or storing a disk-shaped data carrier comprising a holder having a base portion, disk engaging means on the base portion the base portion for releasably engaging the disk-shaped data carrier; and a security device that is removably engageable with the disk engaging means.

19. The package of claim 18, wherein the disk engaging means comprises a button-like member that contracts when pressed, and the security device comprises a security member that prevents contraction of the button-like member.

20. The package of claim 18, in which the disk engaging means comprises a button-like member which depresses when pressed, and the security device comprises a security member that prevents depression of the button-like member.

21. The package of claim 18, in which the security device comprises a plate having an aperture therein which fits around the disk engaging means to prevent actuation thereof when pressure is applied to the disk engaging member via a substantially planar part of the apparatus.

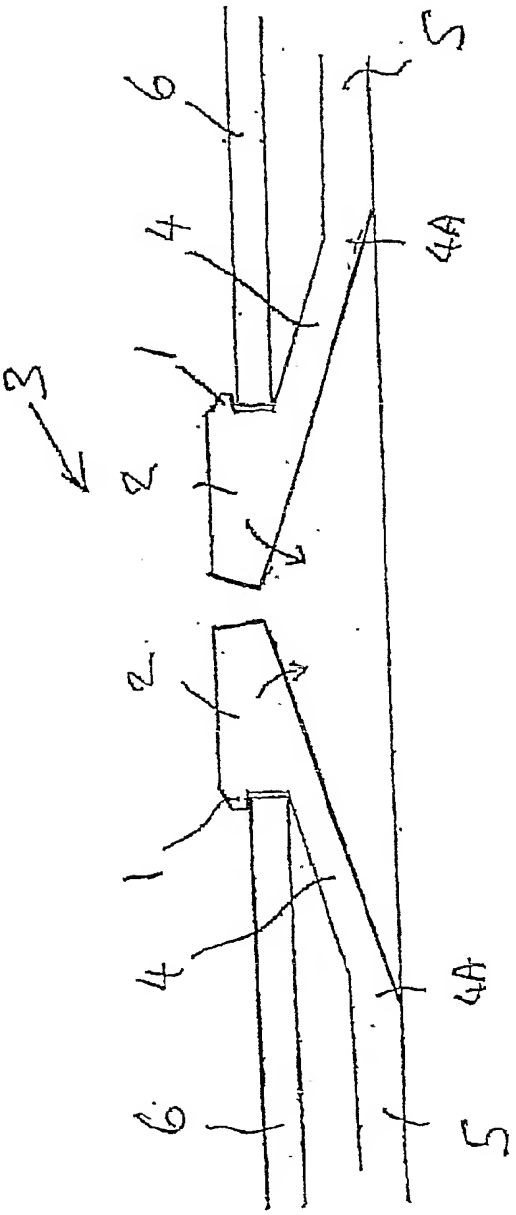


FIG. 1A

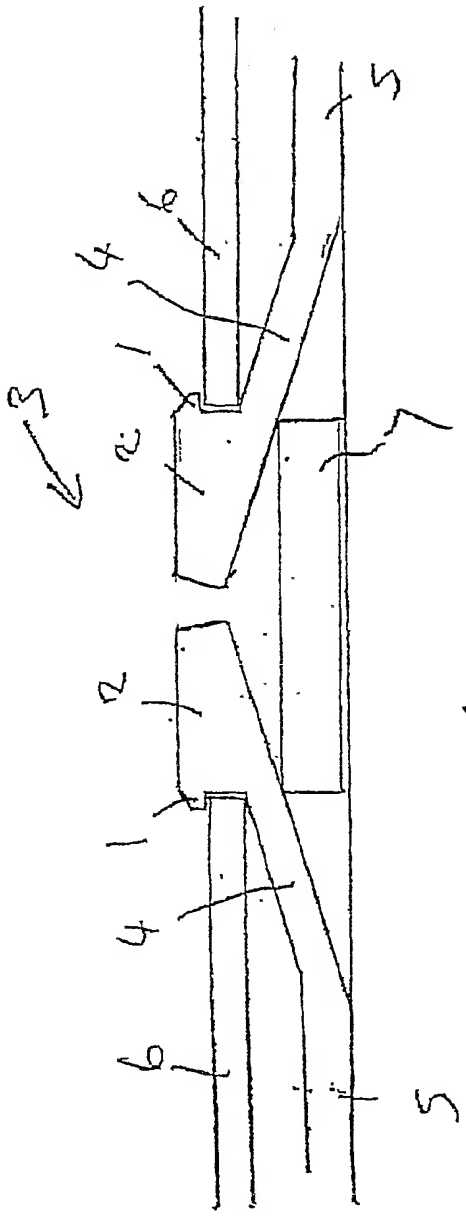


FIG.1B

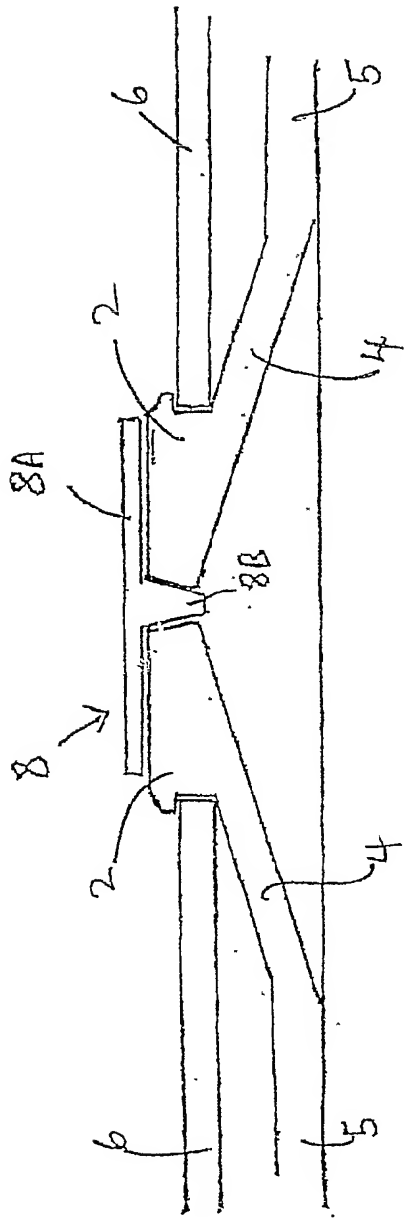


FIG. 1C

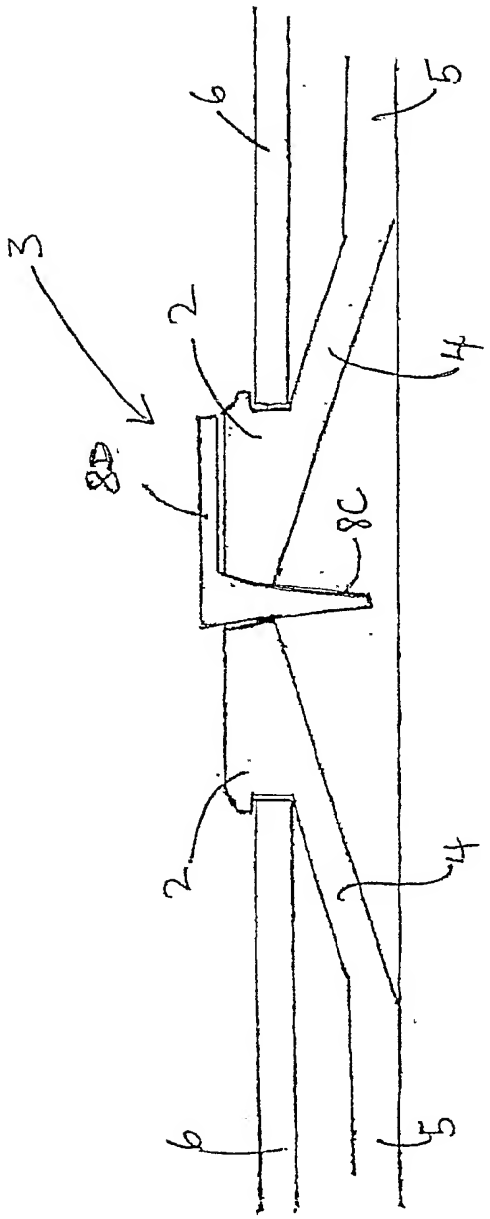


FIG. 1D

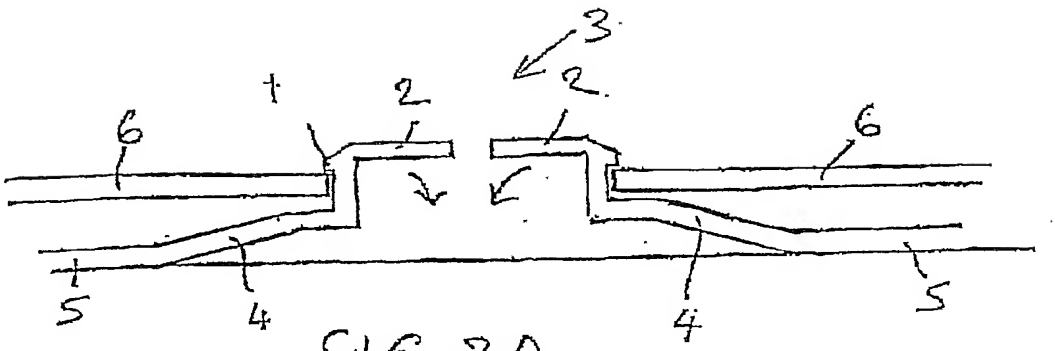


FIG. 2A

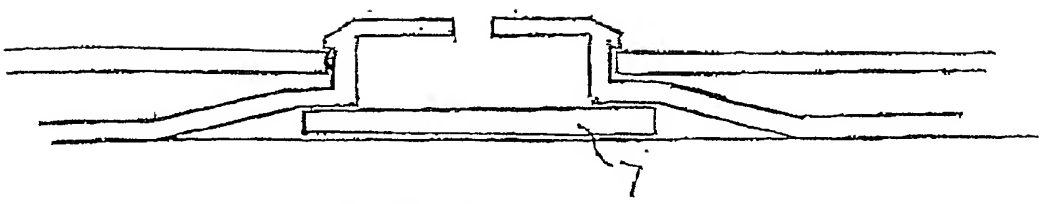


FIG. 2B

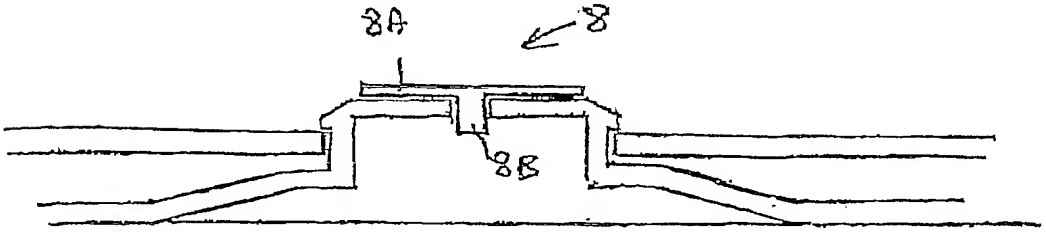


FIG. 2C

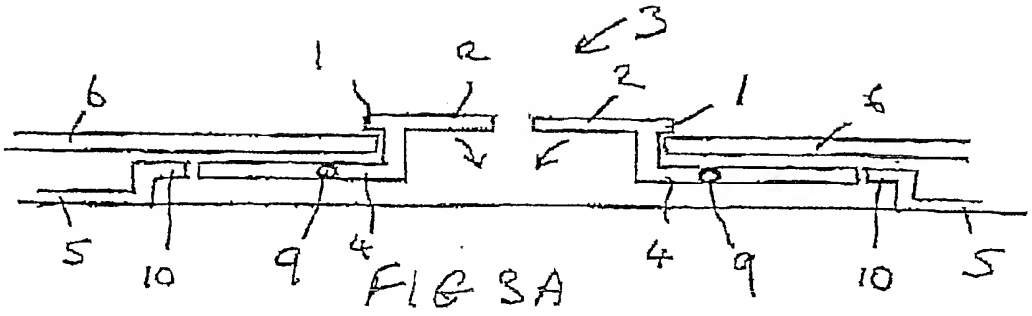


FIG 3A

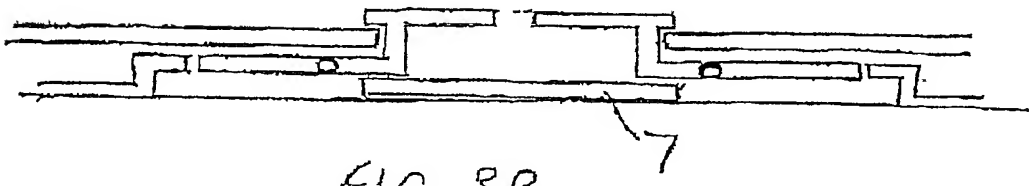


FIG 3B

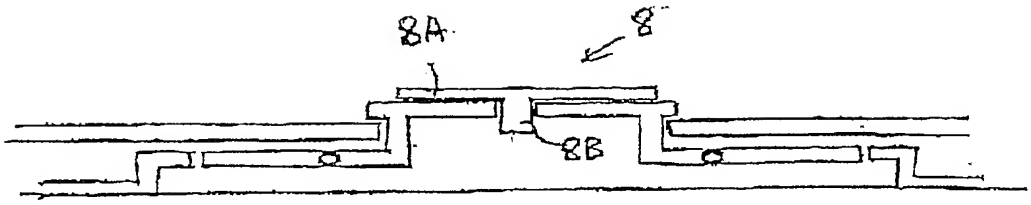


FIG. 3C

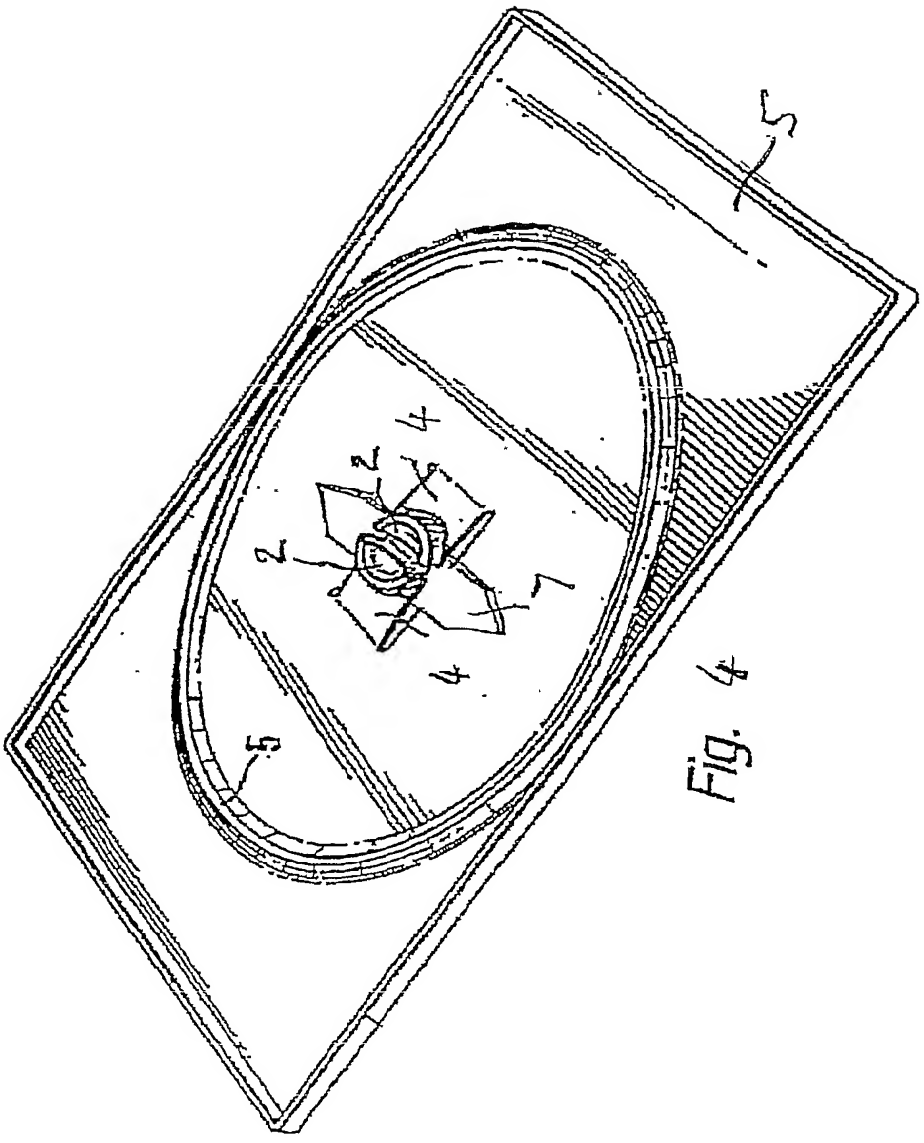


Fig. 4

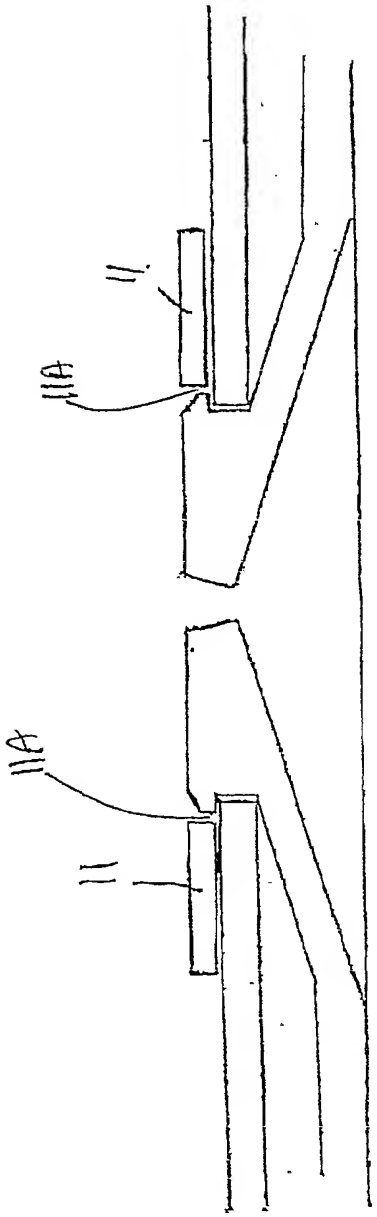


FIG.5A

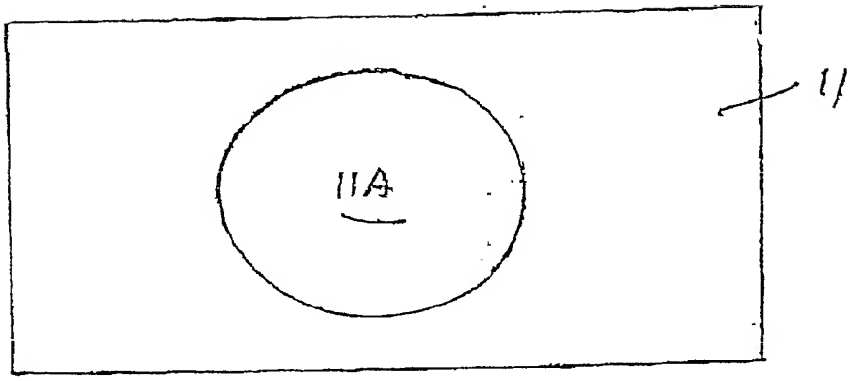


FIG 5B

INTERNATIONAL SEARCH REPORT

Int ıal Application No
PCT/GB 01/04553

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G11B33/04 E05B73/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G11B E05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 750 618 A (SCHUBERT OTTO) 14 June 1988 (1988-06-14)	1-6, 8-11, 13-15, 18-20
A	column 2, line 41 -column 4, line 53; figures 1-8	12

X	US 6 065 593 A (HOWERTON WILLIAM CASSIDAY ET AL) 23 May 2000 (2000-05-23) the whole document	1-6,11, 13-15, 18-20

A	GB 2 175 343 A (MINNESOTA MINING & MFG) 26 November 1986 (1986-11-26) the whole document	1-6,8-20

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
1 March 2002	12.03.02.

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Moje, A

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 01/04553

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-6,8-20

   A removable security means characterized in that it inhibits actuation of the release member

2. Claims: 7,21

   A removable security means characterized in that it prevents actuation of the release means when pressure is applied to the release means via a substantially planar part of the holding apparatus

INTERNATIONAL SEARCH REPORT

Int nal Application No
PCT/GB 01/04553

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 123 192 A (RUFO JR GEORGE F) 26 September 2000 (2000-09-26) abstract	1-6,8-20
X	US 5 896 985 A (NAKASUJI TAMOTSU) 27 April 1999 (1999-04-27) column 2, line 26 -column 4, line 25; figures 1,3-5	1-8, 14-16, 18-21
X	FR 2 785 439 A (MOULAGE PLASTIQUE DE L OUEST) 5 May 2000 (2000-05-05) page 3, line 28 -page 7, line 7; figures 1-5	1-8, 14-16, 18-21

INTERNATIONAL SEARCH REPORT

Int nal Application No
PCT/GB 01/04553

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4750618 A	14-06-1988	AT 381405 A	10-10-1986
		AT 302984 A	15-02-1986
		WO 8601929 A1	27-03-1986
		AU 4809485 A	08-04-1986
		DE 3570309 D1	22-06-1989
		EP 0195787 A1	01-10-1986
US 6065593 A	23-05-2000	NONE	
GB 2175343 A	26-11-1986	DE 3518029 A1	20-11-1986
		AU 584695 B2	01-06-1989
		AU 5659486 A	27-11-1986
		CA 1259929 A1	26-09-1989
		FR 2582125 A1	21-11-1986
		JP 2549096 B2	30-10-1996
		JP 61269278 A	28-11-1986
		NL 8601253 A ,B,	16-12-1986
US 6123192 A	26-09-2000	AU 7122300 A	10-04-2001
		CN 1336894 T	20-02-2002
		EP 1137582 A1	04-10-2001
		WO 0117879 A1	15-03-2001
US 5896985 A	27-04-1999	JP 3052060 B2	12-06-2000
		JP 9301468 A	25-11-1997
FR 2785439 A	05-05-2000	FR 2785439 A1	05-05-2000